

**Notice of Allowability**

Application No.

10/715,114

Examiner

Doug Hutton

Applicant(s)

GRAMBIHLER ET AL.

Art Unit

2176

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Response filed 01/11/2007.
2. ☒ The allowed claim(s) is/are 1,3-8,11,13-17,19-22,29,31 and 32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Applicant's Response***

In Applicant's Response dated 01/11/2007, Applicant amended the Specification, amended Claims 1, 4, 11, 14, 17, 20, 29 and 32, and argued against all objections and rejections previously set forth in the Office Action dated 09/11/2006.

Based on the amendments, Applicant's remarks and the following Examiner's Amendment, all objections and rejections previously set forth are withdrawn.

**Examiner's Amendment**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tremayne Norris on 02/16/2007.

The application has been amended as follows:

*In the Specification:*

➤ **replace paragraph [0028] with the following rewritten paragraph:**

[0028]        Upon receipt by the mapping engine 106, this source XAML 102 may be used to generate the associated set of binary records 130 illustrated in FIG. 4. In the

illustrative record, it may be noted that every information record 112 is written out before it is referred to. When reading the set of binary records 130 associated with binary representation 108 via binary reader 116 ~~or otherwise~~, assembly and attribute information may be used to build tables of information used to construct a representation of the object tree 110 and set properties.

➤ **replace paragraph [0035] with the following rewritten paragraph:**

[0035] Fig. 7 illustrates aspects of processing which may be used to generate a converted binary representation of source XAML 102, according to embodiments of the invention. In step 702, processing may begin. In step 704, source XAML 102 may be loaded or opened in mapping engine 106. In step 706, the next (or initial) XML token may be converted to a XAML token. In step 708, the XAML token may be converted to a binary record, for instance as part of the set of binary records 130. In step 710, the binary representation record may be written to the set of binary records 130 or other locations, for instance using binary writer 118. In step 712, a determination may be made whether there is additional XML to be read from source XAML 102 ~~or otherwise~~. If there is additional XML input to be read, processing may return to step 706 to map the next XML token to a XAML token. If there is no additional XML input to be read, processing may proceed to step 714 where a file containing the set of binary records 130 may be closed. In step 716, processing may repeat, terminate or return to a prior processing point.

*In the Claims:*

1. (currently amended) A system embodied on a tangible computer readable medium for generating an optimized binary representation of an object tree, comprising:

an input interface to receive extensible application markup language information corresponding to an object tree;

a mapping engine, the mapping engine communicating with the input interface to receive the extensible application markup language information and generate an optimized binary representation of the extensible application markup language information, wherein the ~~optimized binary representation generation~~ comprises ~~elements including an indexed first instance of a novel object type~~creating an object type index for novel types of objects in the extensible application markup language information for each first instance of novel object types, incorporating into the optimized binary representation [[a ]]first identifiers of known types of objects in the extensible application markup language information to invoke [[an ]]associated loaders of the known object types, and a second identifier identifying one or more classes associated with at least one objects of the object tree in the extensible application markup language information and incorporating into the optimized binary representation second identifiers of the associated classes; and

an output interface communicating with the mapping engine, the output interface exposing the optimized binary representation to external resources and transmitting the optimized binary representation to a client machine, wherein each ~~of the elements are~~

created index and incorporated first and second identifier is used to reconstruct the object tree on the client machine.

2. (cancelled)

3. (previously presented) The system according to claim 1, wherein the object tree corresponds to user interface elements.

4. (previously presented) The system according to claim 1, wherein the optimized binary representation further comprises encoded dimension information.

5. (previously presented) The system according to claim 4, wherein the dimension information comprises at least one of a length field and a width field.

6. (previously presented) The system according to claim 1, wherein the output interface comprises a serial interface.

7. (previously presented) The system according to claim 6, wherein the serial interface communicates a serialized binary representation to the client machine.

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8. (previously presented) The system according to claim 1, wherein the external resources to which the binary representation is exposed comprise application programming interfaces.

9. (cancelled)

10. (cancelled)

11. (currently amended) A method of generating an optimized binary representation of an object tree, comprising:

receiving extensible application markup language information corresponding to an object tree;

generating an optimized binary representation of the extensible application markup language information, wherein the optimized binary representation generation comprises ~~elements including an indexed first instance of a novel object type~~creating an object type index for novel types of objects in the extensible application markup language information for each first instance of novel object types, incorporating into the optimized binary representation [[a ]]first identifiers of known types of objects in the extensible application markup language information to invoke [[an ]]associated loaders of the known object types, and ~~a second identifier identifying one or more classes associated with at least one objects of the object tree~~in the extensible application

markup language information and incorporating into the optimized binary representation

second identifiers of the associated classes;

exposing the optimized binary representation to external resources; and

transmitting the optimized binary representation to a client machine, wherein  
each of the elements are created index and incorporated first and second identifier is  
used to reconstruct the object tree on the client machine.

12. (cancelled)

13. (previously presented) The method according to claim 11, wherein the object tree corresponds to user interface elements.

14. (previously presented) The method according to claim 11, wherein the optimized binary representation further comprises encoded dimension information.

15. (previously presented) The method according to claim 11, wherein the step of exposing comprises exposing the optimized binary representation via a serial interface.

16. (previously presented) The method according to claim 11, wherein the external resources to which the binary representation is exposed comprise application programming interfaces.

17. (currently amended) An optimized binary representation of an object tree embodied on a tangible computer readable medium, the optimized binary representation being ~~generating~~generated according to a method of:

receiving extensible application markup language information corresponding to an object tree;

generating an optimized binary representation of the extensible application markup language information, wherein the ~~optimized binary representation generation~~ comprises ~~elements including an indexed first instance of a novel object type~~creating an object type index for novel types of objects in the extensible application markup language information for each first instance of novel object types, incorporating into the optimized binary representation [[a ]]first identifiers of known types of objects in the extensible application markup language information to invoke [[an ]]associated loaders of the known object types, and a second identifier identifying one or more classes associated with at least one objects of the object tree in the extensible application markup language information and incorporating into the optimized binary representation second identifiers of the associated classes;

exposing the optimized binary representation to external resources; and

transmitting the optimized binary representation to a client machine, wherein ~~each of the elements are~~created index and incorporated first and second identifier is used to reconstruct the object tree on the client machine.

18. (cancelled)



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19. (previously presented) The optimized binary representation according to claim 17, wherein the object tree corresponds to user interface elements.

20. (previously presented) The optimized binary representation according to claim 17, wherein the optimized binary representation further comprises encoded dimension information.

21. (previously presented) The optimized binary representation according to claim 17, wherein the step of exposing comprises exposing the optimized binary representation via a serial interface.

22. (currently amended) The optimized binary representation ~~method~~ according to claim 17, wherein the external resources to which the binary representation is exposed comprise application programming interfaces.

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (currently amended) A computer readable medium having a tangible component and computer-usable instructions stored thereon for performing a method of generating an optimized binary representation of an object tree, the method comprising:

receiving extensible application markup language information corresponding to an object tree;

generating an optimized binary representation of the extensible application markup language information, wherein the ~~optimized binary representation generation~~ comprises ~~elements including an indexed first instance of a novel object type~~ creating an object type index for novel types of objects in the extensible application markup language information for each first instance of novel object types, incorporating into the optimized binary representation [[a ]]first identifiers of known types of objects in the extensible application markup language information to invoke [[an ]]associated loaders of the known object types, and a second identifier identifying one or more classes associated with at least one objects of the object tree in the extensible application markup language information and incorporating into the optimized binary representation second identifiers of the associated classes;

exposing the optimized binary representation to external resources; and

transmitting the optimized binary representation to a client machine, wherein each of the ~~elements are created index and incorporated first and second identifier is~~ used to reconstruct the object tree on the client machine.

30. (cancelled)

31. (previously presented) The computer readable medium according to claim 29, wherein the object tree corresponds to user interface elements.

32. (previously presented) The computer readable medium according to claim 29, wherein the optimized binary representation further comprises encoded dimension information.

***Allowable Subject Matter***

Claims 1, 3-8, 11, 13-17, 19-22, 29, 31 and 32 are allowed.

The following is an examiner's statement of reasons for allowance:

*Claims 1, 11, 17 and 29:*

The prior art fails to disclose or suggest generating an optimized binary representation of XAML comprising all of the recited steps.

*Claims 3-8, 13-16, 19-22, 31 and 32:*

These claims are dependent upon Claims 1, 11, 17 or 29 and are thus allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doug Hutton whose telephone number is 571-272-4137. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

WDH  
February 16, 2007

  
**Doug Hutton**  
Primary Examiner  
Technology Center 2100